

TITLE OF INVENTION

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THE TITLE OF THE INVENTION:
POLYPIPE WATER FLOW CONTROL CHOKER GATE
PATENT PENDING NUMBER: 60-397-764
DISCLOSURE NUMBER: 508245

CROSS REFERENCE TO RELATED APPLICATION

NOT APPLICABLE

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR
DEVELOPMENT

NOT APPLICABLE

REFERENCE TO SEQUENCE LISTING, A TABLE, OR A COMPUTER PROGRAM
LISTING COMPACT DISC APPENDIX

NOT APPLICABLE

BACKGROUND

1. When working on farms in the Delta, fields are watered using poly pipe. To control the amount of water that goes through the poly pipe 55 gallon barrels, rope and tape are used to close off the pipe. This allows the farmer to keep certain parts of the field from flooding due to the unevenness of the land. This is a cumbersome task, especially when it comes time to take them up. The barrels don't allow the water to continue on a controlled flow basis, nor does it allow you gauge the amount of water coming through the pipe. With the barrels it's all or nothing on the amount of water you get, it also doesn't help with pushing the water pressure uphill. The barrels help with the watering but it doesn't remedy all the problems.

BRIEF SUMMARY OF THE INVENTION

1. The poly pipe Water Flow Control Choker Gate will allow farmers to push water pressure uphill by completely closing off the downhill pipes quickly and easily. The Choker Gate will eliminate the use of barrels, tape, and rope. These Gates also give farmers the opportunity to have a flow of water that can be controlled. The Gates are designed with an adjustable chain that can be completely closed off, for no water flow. The chain also allows the poly pipe to have from a 1 inch to and 8 inch height to control the amount of water. These Gates can be dismantled from around the pipe for easy and quick movement. This is designed to save time and manpower. The Gates allow the farmers that have uneven farm ground to water with polypipe instead of aluminum or plastic pipes, poly pipe being less expensive and easier to lay in the fields.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING

1. Top Detail: This piece of the Choker Gate is completely detachable from the bottom piece, which allows for assembly and removal from existing poly pipe. The top piece has the connection for the chains; this allows the adjustment in height of the water flow. There is a $9/32$ " diameter hole on the end of piece C that a peg on the bottom piece will snap into.
2. Bottom Detail: This piece is placed under the poly pipe so that piece A is on the pressure side of the water. The chains on the opposite ends of this piece have a connector on the top piece that allows the height to vary from 1" to 8". On the ends opposite the chains in the pegs that hold the top piece in place.
3. Assembly: This view is from the side, showing the Gate open the full 8". When the chains are removed from the top piece the water is flowing full force. If the chains were locked in the lowest position, there would be no water flow.

DETAIL DESCRIPTION OF THE INVENTION

EXPLANATION: The Poly Pipe Water Control Choker Gate is designed to stop or reduce the flow of water through poly pipe. This Choker Gate can be completely closed off to stop the flow of water. It also has the adjustability to be completely open or open partially. The Choker Gate is designed with chains on both sides that allow the height to be opened 1 inch to allow a small amount of water to flow through. The chain is adjustable from 1 inch through 8 inches. This 8 inch allowance is for adjusting the amount of water that comes through the poly pipe.

PROCESS OF MAKING: 1. Using the diagram page for pictures and labels. Weld a piece B ($1/4 \times 1 \times 12''$ flat bar) to each end of piece A ($1/4 \times 1 \frac{1}{2} \times 29 \frac{1}{2}''$ flat bar). Weld piece G ($3/4$ -sch 40 pipe $\times 29 \frac{1}{2}''$) to open end of pieces B. Attach 1 piece F (#2 chain $\times 10''$), by welding 1 link of piece F, leaving $7/16''$ of the link and the rest of the chain to hang from the top, to the outsides of piece B, the end where piece G was attached, both chains should be attached in the same manner. The chains being held vertically, this becomes the top side. Weld 1 piece E ($1/4$ dia. rod $\times 1 \frac{1}{2}''$) to each end of piece A on the bottom side, with $1/2''$ left hanging over the side, this becomes the peg. The bottom detail is complete.

2. To make the top detail, on one end of each piece C ($1/4 \times 1 \times 12''$ flat bar) put a $9/32''$ hole so that the center is $1/4''$ from both side and the end. Now attach the end of piece C, without hole, to both ends of piece D ($3/4$ -sch 40 pipe $\times 30 \frac{1}{8}''$).

Using 2 E pieces (1/4" dia. rod X 1 1/2") attach on the top at each end of piece D where piece C is adjoined.

Leaving a 5/8" overhang toward opposite direction as C (see diagram). Top Detail is complete.

3. To assemble: Top detail piece is placed over bottom piece so that the open side fits over piece A of bottom detail piece. The ends of pieces C that have holes should match up with pegs, pieces E. Slip one piece C on peg E then with a little pressure pull other piece C hole over peg E. this allows the two pieces to swing open and closed. Hook chains at shortest link to close off all the water flow. The longest link will allow water to flow through an 8" opening. Each link adjusts the amount of water flow allowed through pipe. For no restriction leave chains unhooked and open gates to allow water to flow through.

USING THE INVENTION: Detach the two pieces by unhooking the chains from the pegs, then at other end pull outside piece from one peg this will allow opposite side to be easily removed. Place the bottom piece, the one the chains are on, underneath the poly pipe. The bottom piece should be placed so that the chains can be pulled to the top and the 1" flat-bar is standing up on the ground. The bottom piece should be placed so that the 1 1/2" flat-bar (A) is on the uphill side of the field or the pump side. With the pegs down on the ground, the 1 1/2" flat-bar up and to the pump side the weight of the water on the bar will push it in the ground to hold the Gate in place. Reinstall top piece by matching the peg and hole up on one side then pulling the top piece to match up the peg and hole on the opposite side. Press the top piece down and lock the chains at the shortest link, this

will cause the water to be choked off. Placement is very important.

Resetting the chain at the various links will cause the water to flow in restricted amounts.

This device is quicker and easier to set and move than the barrels and tape that are normally used. Over the expanse of a couple of harvests they will become more cost effective, because they are reusable from year to year.